

Peliosanthes reflexa (Asparagaceae), a New Species from Guangxi, China

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Based on a specimen from Shangsi, Guangxi, China, *Peliosanthes reflexa* (Asparagaceae) is newly described. This species is similar to *P. kaoi*, but differs from it in the reflexed perianth, flowers drooping or descending, and linear, pale green, erect bracts.

Key words: Asparagaceae, China, new species, *Peliosanthes kaoi*, *Peliosanthes reflexa*.

Peliosanthes Andrews (Asparagaceae) comprises about 16 species, distributed in India, the Himalaya, Indochina, Malesia, S. China and Taiwan (Chen and Tamura 2000). *Peliosanthes*, *Ophiopogon* Ker Gawler and *Liriope* Loureiro share a unique feature of fruit development, i.e., fruit bursting irregularly early in development and exposing seeds with a sarcotesta. Thus, these three genera have been long considered to be related, and they were often grouped in the tribe *Ophiopogoneae* Endlicher (Conran and Tamura 1998). This relationship was confirmed by molecular phylogenetic studies (Yamashita and Tamura 2000, Tamura et al. 2004). *Peliosanthes* is distinguished from *Ophiopogon* and *Liriope* in having leaves subplicate veined with transverse venation between main veins and filaments united into a corona (Chen and Tamura 2000).

One of the present authors, Mikinori Ogisu, collected a specimen of *Peliosanthes* from Shangsi, Guangxi, China, at a mesic site, rich in humus, in a dark evergreen forest, at about 870 m altitude. This specimen is similar to *P. kaoi* Ohwi from Taiwan (Ohwi

1967, Chen and Tamura 2000), but differs from it in having reflexed perianth, flowers drooping or descending, and linear, pale green, erect bracts. We therefore consider this specimen to be a new species, and name it *Peliosanthes reflexa*.

Peliosanthes reflexa M. N. Tamura & Ogisu, sp. nov. [Figs. 1–2]

Affinis *Peliosanthesi kaoi*, sed perianthio reflexo, floribus cernuis vel descendentes, bracteis linearibus viridescentibus erectis diversis.

Type: CHINA: Guangxi, Shangsi, ca. 870 m alt., Mikinori Ogisu 178 (holo-PE).

Herbs perennial, evergreen. Rhizome vertical, 5 cm long, moniliform; swollen portions 4.5–6.0 mm in diam., producing roots; intercalary portions between the swellings 2.5–3.5 mm in diam.; annual growth 3.5–9.0 mm long; internodes 0.5–5.0 mm long. Roots 1–2 per year, 23–30 cm long, up to 4.8 mm in diam., pubescent, often branched in middle and distal portions. Foliage leaves glabrous, basal, tufted, 5–11 per tuft; petiole 6.5–10.6 cm long, 2 mm broad; leaf blade



Fig. 1. *Peliosanthes reflexa* M. N. Tamura & Ogisu. Habit and abaxial side of leaf (M. Ogisu 178, PE).

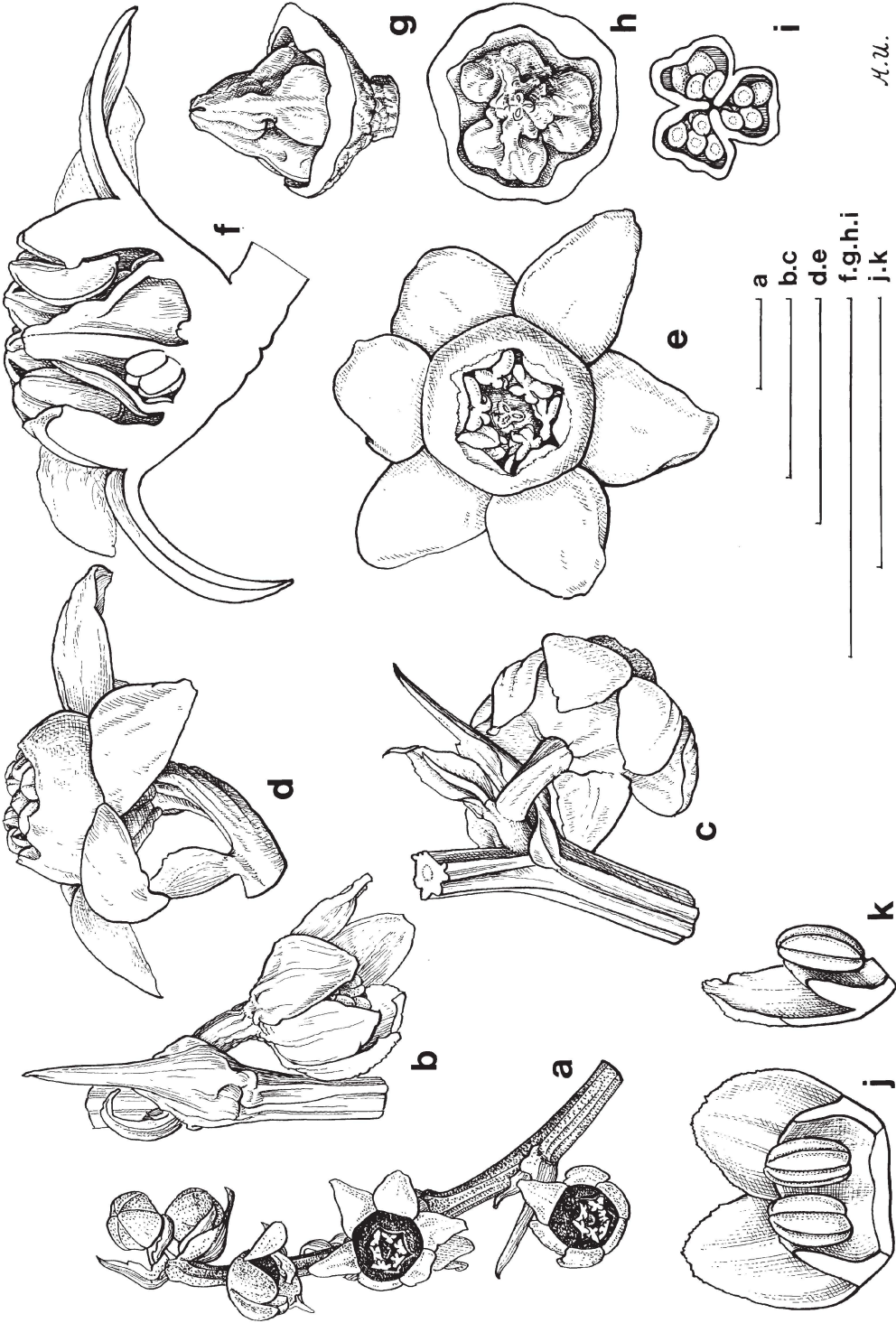


Fig. 2. *Peliosanthes reflexa* M. N. Tamura & Ogisu. b. Young flower and bracts. c. Mature flower and bracts. d-f. Flower. d. Side view. e. Front view. f. Longitudinal section. g-i. Pistil. g. Side view. h. Front view. i. Cross section. j. One-third of perianth and corona expanded with two anthers of young flower. k. Perianth segment, corona segment and anther of young flower. Bar = 5 mm. (all from M. Ogisu 178, PE).

broadly linear to linear-oblong, 7.2–9.7 cm long, 1.7–2.6 cm broad, acuminate at apex, attenuate at base and decurrent on the petiole, slightly scabrous at margin, subplicate veined, with 5–9 longitudinal veins and conspicuous transverse veinlets between the longitudinal veins, sometimes variegated irregularly. Scape 4–5 cm long, 1.7–2.0 mm in diam., glabrous, weakly striate, purple, basally greenish, with 1–2 sterile bracts. Inflorescence terminal, racemose, 3.2–3.8 cm long, glabrous, weakly striate, 7–8-flowered; axis purple, sometimes partially greenish. Flowers solitary, hermaphrodite, drooping or descending; pedicel 3–5 mm long, 0.9 mm in diam., pale green, sometimes purplish; bract and bracteole linear, pale green, erect, basally dilated with white membrane; bract up to 10.5 mm long; bracteole up to 5.0 mm long. Perianth 4.2–5.0 mm long, pale green, more or less speckled with purple; lobes 6, 2.8–3.2 mm long, 2.0–2.5 mm broad, reflexed. Corona epipetalous, hemispherically elevated, 3.7–4.0 mm in diam., 1.0–1.8 mm high, dark purple, fleshy, apically 6-lobed; lobes 0.5 mm long, opposite to perianth lobes. Anthers 6, ovate, 1.0–1.5 mm long, pale yellow, introrse, subsessile, attached to adaxial side of corona lobes. Ovary 1.5–2.0 mm long, half-inferior, 3-locular; ovules basal, 4 per locule, 0.7–0.8 mm long, 0.3–0.4 mm in diam. Style 1, 1.0–1.3 mm long, thickened downward, dark purple. Anthesis November to December.

田村 実^a, 荻巣樹徳^b, 覃 海寧^c: *Peliosanthes reflexa* (クサスギカズラ科), 中国広西壮族自治区から見つかった1新種

著者の一人である荻巣樹徳によって中国広西壮族自治区上思の標高約870 mの暗い常緑広葉樹林床で発見されたペリオサンテス属植物は、台湾産の *Peliosanthes kaoi* Ohwi によく似ているが、*P. kaoi* とは花被が反曲し、花が下を向き、苞が線形、

Habitat: Evergreen forest floor, dark, mesic, rich in humus.

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References

- Chen S. C. and Tamura M. N. 2000. *Peliosanthes* Andrews. In: Wu Z. Y. and Raven P. H. (eds.), *Flora of China* **24**: 261–263. Science Press, Beijing and Missouri Botanical Garden Press, St. Louis.
- Conran J. G. and Tamura M. N. 1998. *Convallariaceae*. In: Kubitzki K. (ed.), *The Families and Genera of Vascular Plants*, vol. III. Flowering Plants: Monocotyledons. pp. 186–198. Springer, Berlin.
- Ohwi J. 1967. A new *Peliosanthes* from Taiwan. *J. Jpn. Bot.* **42**: 317–319 (in Japanese with Latin description).
- Tamura M. N., Yamashita J., Fuse S. and Haraguchi M. 2004. Molecular phylogeny of monocotyledons inferred from combined analysis of plastid *matK* and *rbcL* gene sequences. *J. Plant Res.* **117**: 109–120.
- Yamashita J. and Tamura M. N. 2000. Molecular phylogeny of the *Convallariaceae* (*Asparagales*). In: Wilson K. L. and Morrison D. A. (eds.), *Monocots: Systematics and Evolution*. pp. 387–400. CSIRO, Melbourne.

淡緑色、直立することで異なるので、私達はこの植物を新種と考え、*Peliosanthes reflexa* M. N. Tamura & Ogisu として記載した。

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